

WHAT IS CLAIMED IS:

1. A driving apparatus which drives a load by switching driving conditions with time, comprising:

5 a load driving section configured to drive the load by supplying a voltage and a current;

a switching section configured to switch conditions of the load driven by the load driving section; and

10 a control section configured to obtain load characteristic information after switching by the switching section before the switching, and to set a voltage and a current by which the load driving section drives the load to a voltage and a current corresponding to the load characteristic information after the  
15 switching in synchronization with timing of the switching.

2. The apparatus according to claim 1, wherein:  
the load comprises a plurality of loads; and  
the switching section switches the plurality of  
20 loads with time.

3. The apparatus according to claim 1, wherein:  
the load comprises one load; and  
the switching section switches one load between presence and nonpresence.

25 4. The apparatus according to claim 1, wherein the load is an LED.

5. The apparatus according to claim 4, wherein

the characteristic information contains a  $V_f$  value when a predetermined current amount is supplied to the LED.

6. The apparatus according to claim 4, wherein the characteristic information contains an emission  
5 amount when a predetermined current amount is supplied to the LED.

7. The apparatus according to claim 1, further comprising:

a detection section configured to detect the  
10 characteristic information.

8. The apparatus according to claim 7, wherein the load is an LED, and the detection section includes a light sensor configured to detect a light emitted from the LED.

9. The apparatus according to claim 1, wherein the control section has a characteristic memory section configured to store the characteristic information.

10. The apparatus according to claim 9, wherein the load is an LED, and  
20 the characteristic memory section stores a predetermined emission amount of the LED corresponding to a current value supplied to the LED.

11. The apparatus according to claim 4, wherein the control section sets a current value and a voltage value of the load driving section at different timings.  
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12. The apparatus according to claim 4, wherein the control section sets a voltage value of the load

driving section before predetermined time of the switching timing if the voltage value of the load driving section after the switching timing is larger than that of the same before the switching timing.

5           13. The apparatus according to claim 12, wherein the predetermined time corresponds to power source response time.

14. A lighting apparatus which lights a display device displayed by a video signal, comprising:

10           a driving apparatus which drives a load by switching driving conditions with time, including:

            a load driving section configured to drive the load by supplying a voltage and a current;

            a switching section configured to switch  
15 conditions of the load driven by the load driving section; and

            a control section configured to obtain load characteristic information after switching by the switching section before the switching, and to set a  
20 voltage and a current by which the load driving section drives the load to a voltage and a current corresponding to the load characteristic information after the switching in synchronization with timing of the switching; and

25           a light emitter configured as a load driven by the load driving section to light the display device, wherein

the switching section selects the light emitter driven in synchronization with timing of the video signal.

15        15. The apparatus according to claim 14, wherein the light emitter includes an LED.

16. The apparatus according to claim 14, wherein the timing of the video signal is a video synchronous signal.

10        17. A display apparatus comprising:  
a display device configured to display a video by a video signal; and

a lighting apparatus which lights the display device, including:

15        a driving apparatus which drives a load by switching driving conditions with time, having:

a load driving section configured to drive the load by supplying a voltage and a current;

20        a switching section configured to switch conditions of the load driven by the load driving section; and

a control section configured to obtain load characteristic information after switching by the switching section before the switching, and to set a voltage and a current by which the load driving section  
25        drives the load to a voltage and a current corresponding to the load characteristic information after the switching in synchronization with timing of the

switching; and

a light emitter configured as a load driven by the load driving section to light the display device, wherein

5           the switching section selects the light emitter driven in synchronization with timing of the video signal.

18. The apparatus according to claim 17, wherein the display device includes an LCD.

10           19. The apparatus according to claim 17, wherein the display device includes a DMD (trademark).

20. A driving apparatus which drives a load by switching driving conditions with time, comprising:

15           load driving means for driving the load by supplying a voltage and a current;

switching means for switching conditions of the load driven by the load driving means; and

20           control means for obtaining load characteristic information after switching by the switching means before the switching, and setting a voltage and a current by which the load driving means drives the load to a voltage and a current corresponding to the load characteristic information after the switching in synchronization with timing of the switching.

25           21. A lighting apparatus which lights a display device displayed by a video signal, comprising:

a driving apparatus which drives a load by

switching driving conditions with time, including:

load driving means for driving the load by  
supplying a voltage and a current;

switching means for switching conditions of  
5 the load driven by the load driving means; and

control means for obtaining load character-  
istic information after switching by the switching  
means before the switching, and setting a voltage and  
a current by which the load driving means drives the  
10 load to a voltage and a current corresponding to the  
load characteristic information after the switching in  
synchronization with timing of the switching; and

light emitting means, as a load driven by the load  
driving means, for lighting the display device, wherein

15 the switching means selects the light emitting  
means driven in synchronization with timing of the  
video signal.

22. A display apparatus comprising:

a display device configured to display a video by  
20 a video signal; and

a lighting apparatus which lights the display  
device, including:

a driving apparatus which drives a load by  
switching driving conditions with time, including:

25 load driving means for driving the load  
by supplying a voltage and a current;

switching means for switching conditions

of the load driven by the load driving means; and

control means for obtaining load  
characteristic information after switching by the  
switching means before the switching, and setting a

5 voltage and a current by which the load driving means  
drives the load to a voltage and a current correspond-  
ing to the load characteristic information after  
the switching in synchronization with timing of the  
switching; and

10 light emitting means, as a load driven by the  
load driving means, for lighting the display device,  
wherein

the switching means selects the light emitting  
means driven in synchronization with timing of the  
15 video signal.